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RECORD OF OBSTETRICAL CASES.

[Communicated for the Boston Medical and Surgical Journal.]

THIS report of 734 obstetrical cases was made out by me for, and was read to, the Middlesex East District Society, at the meeting held on the evening of the 9th inst. They are the records of seven different members of the Society, during the years 1858 and 1859, and may be read as a continuation of similar reports in your JOURNAL—one of 586 cases in the number for May 7th, 1857, and the other of 415 cases in the number for April 22d, 1858. Thus, altogether, we have a record of 1,735 cases.

There were 734 births, and 746 children born; 12 twin births, being one in $61\frac{1}{2}$ cases; 414 males, 332 females.

Average duration of pains among

391 United States women,	14 h. 15 m.
296 Irish "	14 " 15 "
14 English "	13 " 30 "
10 Nova Scotia "	13 " 00 "
4 German "	16 " 15 "
6 Canadian "	18 " 15 "
5 Scotch "	12 " 00 "
4 N. Brunswick "	10 " 00 "
1 Australian "	2 " 00 "
1 Switzerland "	5 " 00 "
2 not recorded.	

Longest time of these cases was one week; 2 of 90 hours. Shortest, 15 minutes; there were many of 30 minutes.

209 were 1st births.	8 were 8th births.
181 " 2d "	7 " 9th "
128 " 3d "	3 " 10th "
88 " 4th "	3 " 11th "
50 " 5th "	1 " 12th "
35 " 6th "	2 " 14th "
18 " 7th "	1 not recorded.

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Number of children born in

September,	46	December,	59	April,	66
May,	47	June,	63	July,	70
February,	50	March,	65	January,	76
November,	57	October,	65	August,	82

In 655 cases, the average time of the breaking of the waters previous to birth was 4 h. 40 m.

The proportion of miscarriages that had befallen 391 American (U. S.) women, was 1 in 3, within a minute fraction; 296 Irish, 1 in $4\frac{1}{3}$; one American had had 10 miscarriages and 5 children; one Irish, 7 and 4.

In 718 single cases there were 39 other than normal presentations, 1 in $18\frac{2}{3}$; viz.: breech, 1 in $71\frac{1}{3}$; footling, 1 in $143\frac{2}{3}$; face to pubes, 1 in $51\frac{1}{2}$; forehead, 2 cases; occiput posterior, 5 cases; cord and arm, 2 cases, one child being stillborn at 5 months, the other also stillborn, but delivered by the feet, after replacement of the arm and turning; shoulder, 1 case—"had been under the care of a midwife, turning and delivery, stillborn."

Average time in attendance, $3\frac{1}{2}$ hours.

Twin Cases.

First. Irish. Primipara; age, 22 years; sanguine temperament. The waters broke at 10.30, P.M., June 6th; first child born at 6.40, A.M., June 7th; second at 7, A.M.; both presentations normal; second child dead for some hours; females; time in attendance, 2 hours.

Second. Irish. Age, 38 years; had one miscarriage; bilious temperament. Third child. Waters broke at 5, A.M., Jan. 19th. First child born at 9.30, A.M.; second, delivered by forceps at 11.30, P.M.; stillborn; both presentations normal; males; time in attendance, 26 hours.

Third. U. S. Primipara; age, 26 years. Waters broke at 6, A.M., Sept. 30th. First child born at 12, M.; the other followed; presentation normal; males; 7 months; breathed but a short time; time in attendance, 7 hours.

Fourth. English. Age, 37 years. Third childbirth. Born at 7, A.M., July 15th. Presentation normal; time in attendance, 1 hour.

Fifth. U. S. Primipara. Age, 23 years. Sanguine temperament. First child born Oct. 20, at 4.30, A.M.; second at 5.15, A.M. Presentation of first, feet; of second, normal; females; time in attendance, 3 hours.

Sixth. U. S. Primipara. Age, 32 years. Nervo-bilious temperament. Waters broke at 5, A.M., April 4th. First child born at 8, A.M.; second, at 8.30; both presentations normal; males; time in attendance, $4\frac{1}{2}$ hours.

Seventh. Age, 29 years. Phlegmatic temperament. Fourth labor. Waters broke while asleep. First child born at 11.45,

P.M., August 11th; second at 12.15 of the 12th. Presentation of first, cord and foot; of the second, cord and head; male and female; time in attendance, 1 hour.

Eighth. Age, 26 years. Phlegmatic temperament. Had had 1 miscarriage. Third labor. Waters broke at 6.45, A.M., Oct. 16th; children born at 7 and 7.30, A.M. Presentation of first, normal; of second, occipito-posterior; male and female; time in attendance, 1½ hours.

Ninth. Irish. Age, 25 years. Bilious temperament. Third labor. Waters broke July 1st, at 11, P.M. First child presented a shoulder, the head being towards left groin, pains violent; delivered by turning, at 12.15, A.M., July 2d; second presentation, normal; female and male; time in attendance, 4 hours.

Tenth. Irish. Primipara. Age, 22 years. Aborted with twins at 10 weeks; much flooding; recovered.

Eleventh. Age, 31 years. Sanguine temperament. Third labor. Both children born April 12th, at 11.45, P.M. Presentation normal; males; time in attendance, 1½ hours.

Twelfth. Age, 29 years. Nervous temperament. Third labor. Waters broke at birth, May 21st, 11.30, P.M. Presentations normal; females; time in attendance, 15 minutes.

Brief Remarks on Cases.

1. "Long-continued fainting, without flooding of extra amount; brandy, spts. Ammonia aromat."

2. "Frequent profuse flooding during three months previous to delivery; a 7 months child, which lived 2 hours."

3. "Primipara. In charge of a female practitioner, who had given lobelia inflata, which produced frequent vomiting and retching. A full, hard pulse, and a bloated countenance. Convulsions. The placenta not coming away, I carefully and easily removed it; took two pints of blood from arm, and administered ether. She was apparently easy, and free from convulsions for an hour, at the end of which time she was again attacked, and died."

4. "Face presentation; I at once ruptured membranes, turned and delivered."

5. "Puerperal convulsions; took blood from the arm. Patient did well."

6. "Puerperal fever, treated with the tincture of veratrum viride, and calomel, opium, antimony, and leeches to os uteri, with marked benefit; dysuria with catheterism; tincture of veratrum viride was freely used externally for phlegmasia dolens; metritis; sick 8 weeks, but fully recovered."

7. "Consultation case. Found head in superior strait; applied long forceps. Both attendants tried faithfully in vain; pelvis contracted at the promontory of the sacrum; performed embryotomy, and with much difficulty removed the child in an hour and a half. The mother died 7 days after, of peritonitis."

8. "Puerperal fever; treated with tincture of veratrum viride, salines, and leeches to os uteri; recovered well."

9. "Severe uterine hæmorrhage; used ice in utero; the foot of bed was kept raised ten inches through the night. Anæmia continued for months."

10. "May 6th. Profuse uterine hæmorrhage; placenta prævia. On the day of her confinement, June 8th, she becoming weak, chloroform was given, and delivery accomplished by turning; through in five minutes; she being faint, the lower part of the bed was raised upon three bricks. Mother and child both did well."

11. "Imperforate rectum, three fourths of an inch within the anus; operated, and obtained a free discharge of meconium; the child died 4 days old, jaundiced."

12. "On the fifth day after delivery, mother and child died of scarlatina."

13. "Convulsion immediately after delivery; chloroform; recovery."

14. "Face presentation; delivery without interference."

For the Middlesex East District Society,
Winchester, May, 1860.

WILLIAM INGALLS.

TUMOR IN THE POSTERIOR CHAMBER OF THE EYE.

By J. H. DIX, M.D., BOSTON.

[Communicated for the Boston Medical and Surgical Journal.]

FEBRUARY 28th, 1860.—Clara Jaue —, aged 10, daughter of Mr. T., of North Weymouth, Mass., three years ago was wounded with a stone, which cut through the cornea and sclerotic a gash about a line and a half long, at the lower and outer side of the cornea. The iris protruded from the wound, making the pupil pyriform, but a firm cicatrix was ultimately formed, and the eye became round, and, until recently, had as good or very nearly as good vision as ever before. The two years past she has been steadily at school, and made some close application of her eyes every evening by artificial light.

Three weeks ago, while reading by lamplight, she felt a sudden and rather severe pain in this eye. For a few days previous, a slight redness had been observed in the neighborhood of the wound, which, on the morning after the occurrence of the sudden pain, was increased. For the three weeks past, there has been a constant uneasiness, an occasional pain in the eye, more or less redness about the cicatrix, tenderness of the globe to the touch, and a considerable loss of vision, as if she were looking through a thick veil.

The pupil being dilated as much as its pyriform shape admits, there is seen behind the iris, on the lower side of the pupil, a tumor of a dark-brown color, like the choroid, arching upward and

shading about one third of the whole opening of the pupil from the retina behind. The outline of the tumor is a single curved line, and its surface apparently smooth and rounded.

Diagnosis.—Extravasation of blood under the choroid coat, or the uvea, or both.

Treatment.—Absolute rest of the eye from close application, and avoidance of strong daylight and artificial light. Bathing around the orbit frequently with a tepid infusion of opium (gr. 10 to a teacupful of boiling water).

March 28th.—No pain, tenderness, nor redness of the globe. Vision improved. The tumor as before, but perhaps mounting not quite so high behind the iris. Ung. iodini daily to left temple.

May 26th.—Vision now as good as before the occurrence of the tumor, and since the cut with the stone—that is, very nearly as good as with the sound eye. The tumor is now very sensibly diminished, rising, probably, when the iris is not under the influence of stramonium, not above the margin of the pupil, while its surface is no longer smooth, but corrugated, its superior outline being very irregular and uneven. This result I conceive to be corroborative of the diagnosis.

At the second and third visits, the symptoms of inflammation or irritation having subsided, I examined the eye by the ophthalmoscope. Of the general complexion of the tumor, it gave a less satisfactory exhibition than ordinary daylight with a powerful lens, but it revealed one important fact, that the anterior portion only of the choroid in the immediate neighborhood of the ciliary system, was involved in it, and enabled me very early in the treatment to make a favorable prognosis as to the recovery of vision.

The loss of vision at first was probably due not wholly to the interposition of the tumor between the retina and a portion of the pupil, but also to pressure of the tumor upon the lower side of the crystalline lens, displacing it enough to disturb the refraction of light in its passage to the retina.

THREE CASES OF FUNIS PRESENTATION TREATED SUCCESSFULLY BY THE POSTURE METHOD.

BY S. BRANDEIS, M.D., LOUISVILLE, KY.

CASE I.—Mrs. Katharina Rehm, aged 30, a native of Germany, and who has borne four children (one of which was stillborn in consequence of prolapse of the funis), was seized with her fifth labor on the first day of July, 1858, at 4 o'clock, A.M. At 5 o'clock the membranes ruptured, followed by a full gush of liquor amnii, which carried with it a long loop of the funis and the right hand. The midwife in attendance, having discovered the mischief, sent immediately for my assistance.

I reached the patient within ten minutes, and found the funis, feebly pulsating, outside of the genitals, the hand within, and the head balloting high above the entrance of the pelvis. Remembering a plan suggested by Dr. Thomas, of New York, I forthwith placed the parturient on her knees and elbows, supporting the body with pillows in such a way that the pelvis was a good deal higher than the chest.

With slow and careful manipulations, I succeeded in placing both funis and arm far beyond the head, while I kept my hand within the cavity of the womb, in order to prevent a further prolapse. Strong labor pains set in, and, soon after, the head engaged so firmly in the superior entrance of the pelvis that all apprehension of a procidentia of the funis vanished. The patient was now placed on her back, labor proceeded rapidly, and three quarters of an hour later a living child (a boy) was born.

The patient did very well afterwards. The placenta was spontaneously expelled, there was very little after-pain, and recovery took place rapidly. The child is now eighteen months old, vigorous and healthy.

CASE II.—Mrs. Katherine Rapp, aged 36, a native of Germany, a stout and healthy woman, and the mother of four children, was taken with labor pains at 8 o'clock, P.M., October 12th, 1859. Soon after the arrival of the midwife, the membranes ruptured, and a loop of the funis and hand presented. I was summoned to the case at 11 o'clock, P.M. On examination, I found the midwife's diagnosis correct; the hand was the left one; the loop of the funis, still pulsating, was about three inches long; whilst the head was high above the entrance of the pelvis. The method described in Case I. was immediately carried into operation. The reposition of the parts prolapsed was accomplished in about ten minutes. Labor pains were rather slow for about three quarters of an hour, and the patient, having been very much fatigued by her uncomfortable position, was permitted to lie on the left side with a high pillow under the hips. The pulsation of the child's heart, which had been very feeble, now recovered its full strength, labor-pains re-appeared, the head engaged firmly in the pelvis, no further prolapsus occurred, and, at half-past twelve, a loud-crying child (a boy, eleven pounds in weight) made its appearance. Child-bed proceeded without the least disturbance. The child is now four months old.

CASE III.—Mrs. Elizabeth Bohn, aged 36, native of Germany, of vigorous frame, but somewhat reduced by a bronchial catarrh, which persisted during the later months of gestation, sent for a midwife at 11, P.M., February 3d, 1860. The pains were so slow and feeble that patient and midwife slept several hours during the night. At 5 o'clock, A.M., contractions of the womb re-appearing more forcibly, the membrane ruptured; after which the midwife

discovered the funis projecting through the os uteri, but could not find any fetal part presenting. My assistance was called for at 7 o'clock, A.M., February 4th, 1860.

On examination, I found the funis in from four to five small loops projecting through the os uteri, which was only partially dilated; the head being high above the pelvis, I could discover only by introducing my full hand.

After placing my patient in the position already described, efforts were made to replace the funis, which was more difficult in this case than in the two former, as several loops were projecting, and one would drop down while another was carried up; but nevertheless the aim was accomplished in a very short time, and the operating hand kept within the uterus, in order to prevent another prolapsus. In the meantime, the uterine contractions propelled the head into the pelvis. The patient was now placed once more on her back (to her great comfort), and auscultation soon convinced me of the child's life.

Labor proceeded rapidly, and at quarter past 8, A.M., one hour after my arrival, a crying child proclaimed to me once more the success of the operation.

The patient had some after-pains, which yielded to slight medication. She is now doing well.

A few remarks on the merits of the operation employed in the cases just reported, will be permitted.

The presentation, or rather the prolapsus of the funis, is by all authorities in the art of accouchement considered as a complication most disastrous to the life of the fœtus, and the great variety of contrivances invented for the occurrence is the most eloquent testimony for the difficulty of its removal.

The space granted to this paper does not permit the reporter, nor is it his aim, to go into a detail of the various modes of treatment; but it may be remarked, that not only the life of the fœtus, but the life as well as the health of the mother, is often endangered or lost through the severe operations—forceps, version and craniotomy—often resorted to, after repeated efforts have failed to replace the funis. The following table, collected from the highest authorities, shows the numerical proportion of this occurrence:

	16,152 cases of labor.	97 funis presentation.	1 out of 165
Collins,	16,152	322	1 " 282
Churchill,	90,983	27	1 " 88
Michaelis,	2,400	38	1 " 535
Boivin,	20,357	41	1 " 411
LaChapelle,	15,652	37	1 " 181
Hardy and McClintock, }	6,702	55	1 " 100
Klein,	5,490	16	1 " 276
Barstch,	4,425	33	1 " 200
Arneth,	6,608	29	1 " 290
Skanzoni,	8,415		

Out of 177,184 accouchements, which is the total amount of the

figures just referred to, prolapsus of the funis occurred 695 times, giving a proportion of one 1:264, showing that this anomaly is one of the most frequent disturbances of labor.

Another table will show the relative mortality of children born under these circumstances:

	PROLAPSUS OF FUNIS.	CHILDREN STILLBORN.
Mauriceau,	39	15
De La Motte,	14	5
Clarke,	66	49
Collins,	97	24
Churchill,	322	220
Hardy and McClintock,	37	25
La Chapelle,	41	8
Michaelis,	27	20
Boivin,	38	18
Arneth,	33	11
Skanzoni,	29	13
	743	408

Thus, 743 cases of prolapsus funis gave 408 stillborn children, a proportion of 1:1.82, which shows clearly enough that accoucheurs have not been very successful in treating this kind of labor.

The rationale of the posture method being obvious to every skilful practitioner, we shall, in conclusion, try to give the indications for it.

First. The operation is only admissible as long as circulation exists in the funis; even if the circulation is feeble, it may soon be restored after the impediment is removed.

Second. The os uteri must be sufficiently dilated or dilatable.

Third. The liquor amnii must be partly retained; otherwise, if it should all have escaped, and the uterus be firmly contracted over the child's body, every effort for the reduction of the prolapsed funis would be in vain.—*Louisville Medical Journal*.

A CASE OF ARGYRIA, WITH DEPOSIT OF SILVER IN THE INTES- TINES, LIVER, KIDNEYS, AND SPLEEN.

By DR. C. FROMMANN.

THE subject of this paper, W. Jordan, aged 60, was attacked in March, 1856, with epilepsy, the fits occurring three to four times daily during the first month, when they lasted an hour at a time; they subsequently became less frequent, and at the end of the year they occurred once a fortnight, and only lasted about a quarter of an hour. Almost from the commencement of the disease, nitrate of silver was exhibited, and for nine months he took a daily pill containing six grains, so that altogether he swallowed about 3½ ounces. Towards the end of July, the skin began to be discolored, gastric symptoms supervened, but still the remedy was persevered with. In the beginning of 1857, there was hæ-

matemesis and other undoubted symptoms of gastric ulceration, and scarce any food could be borne. He recovered so far as to undertake a voyage to England, but the fatigue proved too much for him, and on his arrival he was compelled to seek aid at the German Hospital. On his discharge he was able to take food well, but his circumstances being very bad, he had a relapse, and was again admitted into the German Hospital on the 6th November, 1858, in a wretched condition, severe cough and hæmoptysis having supervened. The whole surface exhibited a steel-grey color, which was particularly marked in the face. There was, in addition to the gastritis, advanced tuberculosis, bronchitis, and pneumonia. The patient died two days after admission. The following is an abridged account of the autopsy:—The parts in the face which had exhibited a great intensity of discoloration, owing to their containing more blood, now presented a tint uniform with the rest. In the brain, the choroid plexuses presented an uniform greyish-blue tint. The state of the lungs corresponded with what had been observed during life; the left ventricle of the heart was much hypertrophied. The stomach contained a large quantity of acid brown liquid, streaked with blood; the mucous membrane was covered with a considerable layer of dirty red, viscid mucus, inclosing streaks of black coagulated blood. The vessels were much injected, and there were numerous small extravasations. At the upper part of the posterior wall, half way between the pylorus and cardiac orifice, was a large ulcer, seven centimetres by five (2.75×1.96 inches), at the base of which there was an orifice of the size of a crown-piece, which was blocked up by the pancreas, to which adhesions had formed. The pylorus formed an annular stricture, only large enough to permit the passage of a common lead pencil. The mucous membrane of the duodenum and jejunum was dotted over with many small black granules, most closely aggregated along the folds. In the ileum these spots became more and more scanty; examined by the microscope, the villi in these black spots presented, especially in their globular end, groups of black aggregated particles, varying much in form and size, and without a crystalline character; cyanide of potassium rapidly dissolved these deposits, here as well as in the other organs in which they were found. The spleen was small; its veins had an ashen hue, which was due to a fine granular precipitate upon their coats. The liver was small, congested, and fatty; the small branches of the vena portæ and of the hepatic veins presented the same precipitate of silver throughout, but the capillaries were free from it. Fine sections of the hepatic tissue showed numerous black dots, each of which occupied the centre of an acinus, corresponding to the point of exit of a central vein, and the color was produced by a black margin surrounding the calibre of the artery. The dark color of the branches of the vena portæ was also very characteristic throughout. The largest argentean deposit was in

the kidneys, where the bundles of vessels, in the Malpighian corpuscles and the intertubular capillaries, seemed to be its primary seat. The pyramids all exhibited a dark grey color, which was deepest and all but black near the papillæ. The tubules in these parts were entirely invested with a dense precipitate; so that on a transverse section each tubule appeared surrounded by a black ring. Parts of the skin taken from the temporal, axillary and digital regions were examined. Transverse sections showed a pale, purplish streak immediately underneath the rete Malpighii, following the undulations of the cutis. At the roots of the hairs it accompanied the external sheath towards the bulb, but nowhere except in the sudoriparous glands was a granular deposit to be found; in them it presented an appearance similar to that seen in the renal tubules. The glandular epithelium uniformly presented fatty degeneration.

We may mention that concentrated sulphuric acid, as well as cyanide of potassium, dissolved the argentean deposit; though the latter did so with the greatest rapidity. Portions of the liver and kidneys analysed by Dr. Versmann afforded the following result: 217 grains of dried liver yielded 0.009 grammes of chloride of silver, or 0.0068 grammes of metallic silver, or 0.047 per cent. of metallic silver; 133 grains of dried kidney yielded 0.007 grammes of chloride of silver, or 0.0053 grammes of silver, or 0.061 per cent. of the latter.—*Archiv. für Patholog. Anat.*

Bibliographical Notices.

A Treatise on Medical Electricity, Theoretical and Practical, and its use in the Treatment of Paralysis, Neuralgia, and other Diseases. By J. ALTHAUS, M.D. Philadelphia: 1860.

THE first application of electricity to medical purposes was made over a century ago, and, about 1780, it had a wide celebrity, from which, owing to the imperfect apparatus then known and the non-fulfilment of the marvellous results expected from it, it fell into utter neglect; which was not so undeserved as some people have thought. Its use could not become general before the effects it produces in the living body had been investigated. Its application was mere experimentation; unlooked-for results followed the empirical use of it: while some physicians failed to give relief in paralysis, others found it efficacious in impetigo, and others in chronic ophthalmia and chilblains.

While ignorance of the subject prevented conscientious physicians from using this agent, there has been, from the time prior to the introduction of the Perkins tractors to the employment of the electro-chemical baths, an uninterrupted succession of more or less enterprising individuals who have lived on the public as electric therapeuticians, and perhaps the greatest harm these people have done has been the discredit they have thrown on their own specialty.

The different medical journals of the last sixty years contain a num-

ber of more or less reliable accounts of diseases cured by this agent: these were forgotten as soon as published, showing how great professional scepticism and indifference were upon the subject, and it cannot be denied that these feelings, in a lesser degree, are still held by the majority of medical men. It is therefore with pleasure that we see the re-print of Dr. Althaus's work, the object of which is to show to the profession what may reasonably be expected from a judicious use of electricity in medicine.

The author is not an enthusiastic panegyrist, contending "that it is a therapeutical agent superior to all hitherto discovered." He knows that "it sometimes happens that in cases which to all appearances are suited for electric treatment, and in which the agent has been judiciously employed, it nevertheless produces little or no benefit: in fact, it is as little infallible as any other remedy we possess." He theorizes little, and is very cautious in using vague terms, as "increasing vital force," or "diminishing organic action." The perusal of his work does not leave us with the doubt we feel on the reliability of a writer who deals in expressions like "electricity working in the direction of health," "connecting and harmonizing functions," "controlling morbid tendencies," &c. He does not pretend to go farther than our present knowledge of the physiological effects of electricity warrant. He has therefore been most anxious to render the physiological part of his work as complete as possible. Half of the book is devoted to this subject, and the author shows himself well versed in the foreign literature concerning it.

The first chapter is on Forms of Electricity: the second on its physiological effects, under the received name of Electro-physiology; the third on the Medical Apparatus; the fifth on Electro-therapeutics. The fourth chapter, on Electricity as a means of diagnosis, belongs properly to the fifth, as it is available only in distinguishing, by the greater or less contractility of muscular tissue, between certain forms of paralysis.

Our space does not allow us to give as complete an analysis of this work as we could desire: we purpose to call attention chiefly to the fifth chapter, that on electro-therapeutics. But before alluding to the practical part, we must briefly mention some of the laws which govern the application of electricity, and the ignorance of which has contributed to produce such different results in apparently identical cases.

It is of paramount importance to keep in mind the difference between the two forms of electricity furnished by our present apparatus; that of the galvanic battery, or continuous current, and that of the magneto-electric machine, the interrupted or induced current. In 1831 Faraday discovered that, when two wires are side by side, but not touching each other, if the current of a galvanic battery pass through one of them, it produces in the second wire a second electric current. This is called the current by induction, and it takes place only when the circuit of the battery is closed or opened. It does not last, nor does it return as long as the current of the battery passes uninterruptedly through the first wire. The same effect is produced by a magnet in proximity to a wire; in withdrawing or replacing either the magnet or the wire, an induced current is produced in the wire. It is on this principle that all magneto-electric apparatus are constructed.

The induced current may be considered a continuous one rapidly
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opened and closed. The effects of the two are, however, not the same, but we may, by rapidly breaking and making the circuit of a battery, imitate an induced current, and by producing an excessively rapid succession of induced currents we can approximate some of the effects of the continuous one. The principal difference lies in the infinitely greater power possessed by the continuous current of causing chemical decomposition.

A current is said to be "direct" when it follows a nerve *towards* its ramifications, and "inverse" when it moves towards the nervous centres.

The most important of the well-established effects of the two electric currents, on which their application in medicine depends, are the following.

Though electricity has a direct influence on muscular tissue, contractions produced in the living body are principally created by its action on the motor nerves. Hence the necessity of choosing the so-called motor points to place the electrodes.

Electricity, by exciting muscular contraction, increases interstitial chemical changes; producing, as a result, greater circulation and heat. Hence its influence in muscular atrophy. If a nerve be in its normal condition, a contraction of the muscles to which it is distributed is produced only on establishing a current through it.

Muscular contraction is greater if the current be direct, than if it be inverse. The reverse exists as to sensibility.

If a direct continuous current (or a rapidly interrupted one) be sent through a nerve, its *sensibility* is diminished. The result is more striking if there existed before a morbid increase of sensibility, as in neuralgia.

The excitability (i. e., the power of exciting contraction) of a nerve is, within certain limits, diminished by a direct current, and increased by an inverse one.

To form a just estimate of the value of electricity as a remedial agent, we must recal to mind its different effects on the living body. They are:—

1. Modification of chemical action.
2. Irritation.
3. Excitement of the proper (Hallerian) sensibility of muscular tissue. This, however, cannot practically be separated from the
4. Excitement of nervous influence and sensibility.

Under the first head are included electro-puncture, and canterization by wire rendered incandescent by the continuous current.—(Page 331.) This belongs properly to surgery, and we shall only mention it incidentally. The power of modifying chemical action and producing irritation belongs to many heterogeneous substances, and it remains still to be proved that electricity has any advantage over the means commonly used.

It is said that aneurisms have been cured by it. The continuous current produces, it is true, in an aneurismal sac, fibrinous coagulation, but Dr. Broca has shown (page 333) that as the clots contain many blood cells they are not firm; that gangrene may follow the inflammation of the punctures made by the needles; and besides, many aneurisms and varices are readily cured by pressure or other means, so that, except as a last resort, electricity is not to be recommended. The passage of the induced current has created alarming symptoms

of inflammation, and if the aneurism was healed it was owing to the dangerous inflammatory action which it created.

Dr. Golding Bird (page 211) has used a single galvanic pair to produce a slow and painless moxa, which in some cases might be useful. The epidermis being removed by a blister, two pieces of zinc and silver foil, joined by a copper wire, are placed upon the cutis. The salt of the serum is decomposed. Chloride of zinc forms at the zinc plate and produces, in forty-eight hours, an eschar, which separates in four or five days; the sore, if poulticed, discharges freely. As for the disintegration of urinary calculi, and dissolution of cataract (page 343), the less said of them the better.

When a series of electric sparks pass from or to the skin, a local irritation is created. Whether this be a variety of lichen or not, it does not seem to possess any therapeutical advantage over the erythema of a mustard poultice, or the eczema of croton oil, and those cases of scrofulous swellings, goitre, and ulcers of various kinds which were cured by it, would probably have got well under more convenient applications. It is owing to localized irritation that Mr. Holl's well-known cure of ununited fracture occurred. Mr. Holl (page 192) introduced a needle from each side of the limb into the interspace between the bones, and passed a continuous current through. The operation was repeated every day for a fortnight, and a cure ultimately resulted. The fracture had been very movable, and had existed for over a year.

All these effects may be produced by other means than the battery and magneto-electric apparatus, but we have no other means of influencing the muscles and nerves in the same manner as by electricity. The greatest part of the fifth chapter of Dr. Althaus's work is devoted to paralysis, and he deserves the credit of having treated this subject faithfully.

What follows contains his views; often expressed in his own words.

In traumatic paralysis (p. 261), or that produced by disorganization of the nervous centres, electricity has no influence to further the reunion of the divided nerve or to check the disease.

In paralysis caused by extraneous growths in or near the brain or spinal marrow, it is useless to say that it does no good.

After an apoplectic stroke (p. 259), in a certain number of cases reparation is accompanied by a gradual amelioration of the paralytic symptoms. There is then, in most cases, no need of electric stimulation. In other instances, the cyst which forms around the apoplectic clot creates a constant irritation in the brain, shown by rigidity of the muscles (especially the biceps and hamstring muscles). This rigidity must not be confounded with that produced by atrophy. Electricity in these cases can be of no use, and injudiciously employed may produce fresh cerebral effusion. Finally, the cicatrix may have been formed, and there may be no rigidity of the muscles, but the paralysis still continues in a more or less degree, owing, probably, to incipient atrophy of the muscle, or unknown disturbance in the nerves. In these cases, the electric current may be employed with a fair chance of success, and should be localized in the paralyzed motor nerves and muscles.

Those cases (p. 261) in which neither the nervous centres nor the motor nerves have been palpably injured, are often wonderfully amenable to electricity. These include:—

Hysterical paralysis (p. 291), often getting well in a short time without treatment, or resisting for years a variety of energetic therapeutical experiments. The electric current locally applied, or faradisation* of the skin, has, in many cases, yielded remarkable results, although they are by no means infallible.

Rheumatic paralysis (p. 292), occurring often in anglers or lumbermen, affecting, by preference, the lower extremities, and simulating spinal disease. There is no affection in which the benefits of electricity are more striking. Dr. Althaus mentions ten cases successfully treated.

In lead-palsy, even when the bulk of the muscles is considerably reduced, the most reliable treatment is the use of the electric current.

Incomplete paralysis of the lower extremities, connected with disease of the urinary system (p. 294), when not disappearing after the impediment to the discharge of urine is removed, is most essentially benefited by faradisation.

Wasting palsy, when general, is intractable under any treatment. When partial, it is benefited by no other than the electric treatment, although certain cases end fatally in spite of it.

Of local palsies (p. 284), those of which anything certain can be said, are :—Palsy of the muscles of the eye. Although some cases have been reported successfully treated, with our present knowledge and means it is a difficult and dangerous operation.

When the facial nerve is paralyzed, after exposure to cold, it generally gets well of itself. In cases of long standing, electrification of the separate muscles of the face may be useful in exciting muscular irritability. When this affection is symptomatic of other disease, electricity is worthless.

In nervous aphonia (p. 284) the use of this agent is very valuable. Of fifteen cases treated by Dr. Althaus, eleven, of comparative short duration, recovered, while four, of longer standing, remained unimproved. It is true that not unfrequently the voice comes back suddenly of itself.

We can only allude to the use of the current in atony of the bowels and paralysis of the bladder, for sufficient data do not as yet exist to warrant a conclusion on the subject. The same may be said of invagination of the intestines, which, theoretically, might be amenable to electricity.

It is generally admitted that spasmodic affections are much less influenced by this agent than paralysis. Nothing is sufficiently known to warrant the use of it in any one case.

Its use in nervous diseases is much more limited than might at first be supposed. In loss of taste and smell, its effects are unknown. In amaurosis its use, besides being dangerous, is of very doubtful benefit. In nervous deafness, its usefulness is very uncertain. Dr. Althaus seems to think better of it than other practitioners.† In hysterical anæsthesia of skin it has succeeded in effecting a cure, other means having failed. Some cases of scrofulous photophobia in chil-

* To connect the name of Faraday with the electro-magnetic machine, Duchenne proposed the word "faradization" for the use of the induced current in medicine. The term has not been generally adopted, except in England.

† A. Becquerel, *Traité des App. de l'Elect., &c.* Paris, 1857. Page 238. En résumé, je me crois parfaitement autorisé à dire que les courants électro-magnétiques n'ont pas d'efficacité réelle dans le traitement de la surdité nerveuse, lorsque celle-ci est essentielle et non symptomatique.

dren are certainly relieved by a weak current. It has to be repeated more than once, however.

Ever since the first appearance of electricity as a remedial agent, it has been used against neuralgia, and every writer on the subject has reported cases successfully treated. We regret that Dr. Althaus does not enter into more details on this subject—he gives but two cases (pages 318, 320), one of *tic douloureux*, the other of *sciatica*. It results from the general experience of those physicians who have employed electricity, that most neuralgias, not symptomatic of other disease, are readily amenable to it, and generally in a shorter time than by other remedies: on the other hand, some cases show that the use of it has aggravated the evil instead of diminishing it; this may possibly have been owing to the wrong direction of the current, it being known that a direct current diminishes the sensibility of the nerve, while an inverse one augments it.

We miss also, in the work before us, any allusion to the use of this agent in lead colic and asthma, in both of which experience has shown that something may be expected from it.

The book of Dr. Althaus cannot be called an original work; it is a compilation made by a person thoroughly acquainted with the subject, and, on this very account, will it be much more liable to call professional attention to the subject. On the whole, it is the best book of the kind we are acquainted with, and we hope that it may serve to banish some of the professional doubts as to the usefulness of electricity as a remedial agent. **

THE BOSTON MEDICAL AND SURGICAL JOURNAL.

BOSTON: THURSDAY, JUNE 7, 1860.

THE Annual Meeting of the Massachusetts Medical Society was held in the hall of the Lowell Institute, Boston, on Wednesday, May 30th, 1860, at 10, A.M. The President, Dr. John Homans, in the chair.

After the usual business, Dr. C. C. Holmes, of Milton, offered the following resolution, which was unanimously adopted:—*Resolved*, That a committee of five be appointed to propose what action, if any, is proper, on the part of this Society, respecting the disease now prevailing among the cattle of this Commonwealth, and that the committee be instructed to report at the earliest moment practicable. The Chair nominated Drs. H. I. Bowditch, J. Sargent of Worcester, J. G. Metcalf of Mendon, S. Whitney of Framingham, and C. C. Holmes of Milton.

Three communications were then presented:—one upon *Neuroma*, by Dr. Alfred Hitchcock, of Fitchburg; another upon the *Zymoses* of 1859, by Dr. Ephraim Cutter, of Woburn; and a third upon the subject of *Vaccination* under the direction of the Middlesex East District Medical Society, by Dr. A. Chapin, of Winchester.

In reference to a memorial presented to the Councillors at the stated meeting in February, 1860, the following resolution was unanimously adopted:—*Resolved*, That the Society assume the payment of the ex-

penses of the several suits brought by Ira Barrows against Drs. B. Carpenter, L. V. Bell and D. H. Storer, and hold the memorialists harmless from all pecuniary liabilities growing out of them.

The committee appointed to consider the subject of the disease now prevailing among cattle, reported the following preamble and resolution, which were unanimously adopted: Whereas a disease, the nature of which is not well understood, and the treatment of which has been to a remarkable degree unsuccessful, is now prevailing among cattle in this Commonwealth, and whereas the Legislature is this day convened to consider this specific object, therefore, *Resolved*, That a committee of nine from the Mass. Med. Society be appointed by the Chair to urge upon the Legislature the establishment of a scientific commission to investigate said disease. The Chair appointed Drs. J. Bigelow, Geo. Hayward, H. I. Bowditch, and J. B. S. Jackson, of Boston; O. Martin, of Worcester; J. C. Bartlett, of Chelmsford; J. Gardner, of Pawtucket; C. P. Fiske, of Sturbridge; and J. G. Metcalf, of Mendon.

The Chair nominated the following Committee on Scientific Communications for the ensuing year:—Drs. John G. Metcalf of Mendon, H. I. Bowditch of Boston, and George Choate of Salem, and they were appointed.

The appointed hour having arrived, Dr. O. W. Holmes delivered the Annual Address. This was upon a subject which has always especially occupied the most active minds of the profession in this city—the use and abuse of drugs. As it is soon to be published, we will not now attempt an analysis of it.

After a vote of thanks to Dr. Holmes for his eloquent and interesting discourse, the Society assembled in Faneuil Hall, where the usual dinner was served. A prayer was offered by the chaplain, Rev. Rufus Ellis.

On the removal of the cloth, the members were welcomed by the Anniversary Chairman, Dr. D. H. Storer, as follows:—

Welcome, Fellows of the Massachusetts Medical Society. Welcome to this annual festival. Let us forget, for the passing hour, our professional responsibilities, and devote it to social intercourse. Let our meeting be, what a meeting of old and tried friends should be, replete with gratitude and hope; *gratitude*, that our beloved Institution should have existed for so long a period, constantly increasing in strength and usefulness; *hope*, that its future career may be more brilliant than its past.

With the history of our Society you must all be familiar—with its early struggles, its gradual growth, its final success. At no previous period have its members been more numerous; never has there existed a more honorable intercourse between them than at the present time. Since our last annual meeting, no pestilence has swept through our ranks; but few are the links which are missed from the chain.

We see the same cheerful countenances—we feel the same cordial grasp, which have heretofore greeted us—and, thank Heaven, he is still spared to us, an exemplar, and councillor and friend, whom we all honor, whom we all love! Joyous, indeed, then, must be our Thanksgiving day! most hearty must be our mutual congratulations!

I would implore, *Our Society's continued prosperity*—to attain which no one will feel a greater desire—no one can make a greater effort, than our most faithful, excellent President.

After a few appropriate words from Dr. Homans, the Chairman offered the following :—

The Orator of the Day—never disappointing, in any intellectual effort, the most sanguine expectations—our community's pride, his friends' idol.

Dr. Holmes responded in his usual happy manner.

The Chairman then said, in the discharge of our every-day professional duties we are constantly needing the services of, we are constantly receiving invaluable aid from our brethren of the other learned professions. A distinguished representative of each of these professions is with us to-day. They are each too well known to require any formal introduction. I will therefore merely recall to your minds and your hearts

The liberal, faithful, Christian gentlemen who aid us so much in our efforts to relieve suffering humanity—and who, when our efforts are unavailing, strive, by virtue of their office, to prepare the weary spirit for its final home.

This called out the Rev. Mr. Ellis, who alluded to the annual address in a complimentary manner, but remarked that as he listened the thought occurred to him that the words of the speaker might produce upon some physicians an effect similar to that produced upon clergymen by the advancement of very liberal religious views. He did not believe, however, that the doctor was in any real danger from his brother physicians, but would recommend the appointment of a committee whose duty it should be to protect him from the apothecaries. He fully recognized the relation existing between physicians and clergymen, and very aptly remarked that the encouragement of quackery by some of his clerical brethren could only be compared to the action of the deadheads upon a railway train, who showed their appreciation of favors by recommending a rival line.

The following sentiment was then offered :—

The Sciences of Medicine and Law—often indispensable together, to established rights which have been alienated, to remove unjust suspicions, to confirm an injured one's innocence or a depraved one's infamy, to determine at what time and by what means a life has been destroyed—to elucidate, in a word, what is involved in mystery.

It would have afforded us much pleasure, gentlemen, to have introduced to you upon this occasion, the eminent legal adviser, who, during the entire last decade of your history, has held himself ready at all times to protect your interests and defend your honor; but paramount duties have controlled him, and he remains at his post in the Capitol of our Republic, one of the ablest advocates of the rights of man—I refer to that accomplished lawyer and honest man, Thomas D. Elliott, of New Bedford. We are honored to-day by the presence of Chief Justice Shaw, of whom it has been well said by a distinguished member of the bar, "the high station which he occupies has been filled by him as none other has filled it, as none other in our day can."

This was responded to by Chief Justice Shaw, who acknowledged in a most feeling manner his cordial reception, and paid a warm tribute to the medical men whose testimony is so often essential in courts of justice.

The following was responded to by Dr. Fiske, of Fiskdale.

The sagacious, judicious, upright country practitioner—the most wel-

come guest in every family within his circuit ; the most valuable, the most valued member of the community in which he lives.

He spoke as representing country practitioners, and showed, in his own person, that they are in every way able to speak for themselves.

The following called out Dr. Jacob Bigelow.

The rational physician—who knows that all real science is based upon the unvarying laws of Nature—that if Truth is sought for, her dictates alone must be followed.

We regret very much that we cannot give the remarks of those gentlemen who responded to the following sentiments from the Chairman.

The genial, sympathizing, warm-hearted Doctor—whose very presence in the sick chamber is sunshine, and whose kind and faithful attentions are the most effectual balm.

Responded to by Dr. Reynolds.

Great as has been the light shed upon the subject of medical jurisprudence during the last quarter of a century, the student proudly claims for America, its most vivifying Ray.

Dr. Ray being absent, answered through Dr. U. Parsons, of Providence, R. I.

We see before us to-day, one who has been in labor for more than fifty years ; protracted, tedious, however may have been his travail, he exhibits no symptoms of *nervous exhaustion*, he presents no appearance of *puerperal mania*, but displays the same vivacity and other peculiarities, which characterized him when we listened to his instructions thirty-five years ago. We rejoice to see him here, to know that he still labors, well.

Dr. Channing replied.

Our brethren throughout the length and breadth of the land, who are devoting their lives to the amelioration of the condition of the insane. Holy is their mission. Most nobly is it being performed. Let us, as one man, God speed them in their work.

This was responded to by Dr. Walker, of South Boston.

Professional integrity—never more strikingly illustrated than by his career, which prompted one of our keenest members, when advising a young man just entering upon the duties of life, to concentrate all he considered necessary to say, in the single word be *Ware*.

Dr. Ware being absent, this was replied to by Dr. Gardner, of Pawtucket.

We have just learned that a gentleman is with us, sent as a delegate to our meeting by the Connecticut Medical Society. In your name, I would offer him a cordial welcome.

To which happy sentiment Dr. Noyes responded.

DR. HOLMES'S ADDRESS.—As the Address delivered by Dr. Holmes last week has been variously and erroneously reported in some of the public papers, the attention of our readers is directed to the following note on the subject from Dr. H. :—

MESSRS. EDITORS,—I beg leave to say that I prepared an abstract of my Address before the Mass. Medical Society for the Boston [daily] Journal, and disclaim all responsibility for opinions attributed to me in any other report of the Address.

June 4th, 1860.

Yours, very truly,

O. W. HOLMES.

VACCINATION WITH DISSOLVED SCABS. *Messrs. Editors,*—The report of the "Westford Vaccination Cases" brings to mind some cases that occurred in New Hampshire last fall and winter. Several persons were vaccinated with scabs, dissolved in water, and as a result were made quite sick for a long time, having unhealthy sores, with some kind of an eruption upon the arm, extending in some instances over the whole body, and remaining, in one form or another, for weeks, and in some cases several months. In some instances the patients were quite sick for a few days, and then recovered; but in none of the arms that the writer examined (of which there are quite a number), was there any indication of there having been true vaccine disease, as judged by the usual marks. Whether *all* that were vaccinated were thus affected, or how many there were, I could not tell. Nor am I prepared, at present, to give the details regarding those cases I saw, for I did not see them till after recovery, and only cite them because of their similarity to the Westford cases, both as regards the kind (or form) of the virus used and its effects.

OBSERVER.

THIRTEENTH ANNUAL MEETING OF THE AMERICAN MEDICAL ASSOCIATION.—The delegates to the American Medical Association assembled in the College Chapel, New Haven, at 11 o'clock on Tuesday, June 5th.

Upon the platform were the President, Dr. Henry Miller of Kentucky; Vice Presidents, Drs. H. F. Askew of Delaware, and L. A. Smith of New Jersey; and the two Secretaries, Drs. S. M. Bemiss of Kentucky, and S. G. Hubbard of Connecticut.

At ten minutes past 11, the meeting was called to order, and after prayer by the Rev. Dr. Fisher of New Haven, the Report of the Committee of Reception was made by the venerable Dr. Knight of New Haven. In alluding to the presence of an unusually large number of the older members of the profession, Dr. K. took occasion briefly to survey the period during which he and they had been co-laborers, this comprising the last fifty years, referring more especially to the great advance that had been made in medical science since the commencement of the present century. He alluded to the discovery of vaccination, the greater certainty of diagnosis, the simplification of medical treatment, the discovery of the anæsthetic powers of ether, and the use of the microscope. Dr. Knight's remarks were quite eloquent, and were warmly applauded.

The Report of the Committee of Arrangements was made by the Chairman, Dr. Charles Hooker of New Haven, from which it appeared that nothing had been left undone by the Faculty of the College and the citizens of New Haven to render the occasion most agreeable to their guests. The Trumbull Gallery of paintings, the Mineralogical Cabinet, and the College Library are thrown open, and every facility is afforded for seeing and visiting all objects of interest in the city and its vicinity. Receptions are to be given on Tuesday and Wednesday evenings by Drs. Ives, Knight, Hooker, Silliman and others, and on Thursday is a grand reception at the State House.

After the presentation of this report, the roll was called by the Secretary, and two hundred and sixty delegates answered to their names. The different States were represented as follows:—Maine, 10; New Hampshire, 11; Vermont, 7; Massachusetts, 50; New York, 49; Connecticut, 41; Rhode Island, 8; Pennsylvania, 28; New Jersey, 8; Delaware, 4; Virginia, 3; North Carolina, 1; South Carolina, 1; Georgia, 6; Mississippi, 1; Louisiana, 2; Iowa, 5; Ohio, 3; Kentucky, 4; Tennessee, 5; Missouri, 4; Wisconsin, 2; Michigan, 4; Indiana, 2; Illinois, 6; Minnesota, 1; District of Columbia, 1.

On motion of Dr. Atlee, it was voted that the surgeons of the Army and Navy be invited to take seats in the Convention.

The report of the committee appointed to draft a code of parliamentary rules, was now presented by Dr. Blatchford, Dr. Lindsley, of Washington, being absent.

After a brief but somewhat excited debate, this was laid upon the table. After a recess, during which the different State delegations were requested to nominate one of their number to serve on a committee of nominations, it was voted to invite the members of the Legislature to be present in the afternoon, to listen to the address by the President of the Association. The Association then adjourned.

At 3 o'clock, the Chapel was filled to hear the address. About three hundred delegates were present. The committee on nominations, after the address, nominated the following as the officers for the ensuing year: Dr. Eli Ives of Connecticut, *President*; Dr. Wilson Jewell of Pennsylvania, Dr. A. B. Palmer of Michigan, Dr. Joseph P. Logan of Georgia, Dr. John B. McDowall of Missouri, *Vice Presidents*; Dr. Caspar Wister, of Pennsylvania, *Treasurer*.

Present from Boston, Drs. Hayward, Homans, Gould, Storer, Bowditch, Shattuck, Borland, Lyman, Upham, Blake, Page, Oliver, Gay, Townsend, B. Joy Jeffries, and others.

The above comprises all the proceedings which we were able to obtain up to the time of going to press.

DEATHS FROM "UNKNOWN" DISEASES.—By a recent amendment of the Registration Law of Massachusetts, Town Clerks and City Registrars are to receive certificates of the causes of deaths from attending physicians only. As delays will doubtless sometimes take place in furnishing these certificates, and perhaps, occasionally, none be furnished, the causes of death in such instances must necessarily at first be classed among the "unknown"—thereby somewhat increasing the numbers under that head in our City Registrar's weekly reports, and consequently in the reports published in this JOURNAL.

THE Legislature of Massachusetts, convened on account of the alarming prevalence of the cattle disease in this State, is still in session.

VITAL STATISTICS OF BOSTON.

FOR THE WEEK ENDING SATURDAY, JUNE 2d, 1860.

DEATHS.

	Males.	Females	Total.
Deaths during the week, ...	47	46	93
Average Mortality of the corresponding weeks of the ten years, 1850-1860,	37.5	34.2	71.7
Average corrected to increased population, ...	..	..	81.8
Deaths of persons above 90, ...	..	..	..

Mortality from Prevailing Diseases.

Consumption.	Croup.	Scarlet Fever.	Pneumonia.	Measles.	Smallpox.
12	3	5	10	6	2

METEOROLOGY.

From Observations taken at the Cambridge Observatory.

Mean height of Barometer, ...	29.935	Highest point of Thermometer, ...	76°
Highest point of Barometer, ...	30.132	Lowest point of Thermometer, ...	39°
Lowest point of Barometer, ...	29.714	General direction of Wind, ...	N. E.
Mean Temperature, ...	57.3°	Whole am't of Rain in the week	2.641 in.

BOOKS AND PAMPHLETS RECEIVED.—Medical Uses of Electricity. By Alfred C. Garratt, M.D. (From the Author.)—Outlines of a plan for a City Hospital. By Henry G. Clark, M.D., Boston. (From the Author.)—Report of the Dean of the Medical College of the State of South Carolina.—Report of the Trustees of the Perkins Institution and Massachusetts Asylum for the Blind.

DIED.—At New York, 30th ult., Dr. Charles Pfaff, 29 years 7 months.—At Baltimore, 3d inst., Joseph Roby, M.D., formerly of Boston, 51.

Deaths in Boston for the week ending Saturday noon, June 2d, 93. Males, 47—Females, 46.—Apoplexy, 1—abscess (on the hip), 1—inflammation of the bowels, 1—congestion of the brain, 3—consumption, 12—convulsions, 3—croup, 3—diphtheria, 1—dysentery, 1—dropsy, 4—dropsy in the head, 3—drowned, 1—debility, 1—infantile diseases, 4—puerperal disease, 3—exhaustion, 1—scarlet fever, 5—disease of the heart, 3—inflammation of the lungs, 10—marasmus, 1—measles, 6—old age, 1—palsy, 1—pleurisy, 3—premature birth, 2—rheumatism, 1—scrofula, 3—smallpox, 2—sore throat, 1—syphilis, 1—typhoid, 1—unknown, 7—whooping cough, 1.

Under 5 years, 45—between 5 and 20 years, 10—between 20 and 40 years, 18—between 40 and 60 years, 12—above 60 years, 5. Born in the United States, 66—Ireland, 23—other places, 4.